

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/830,772

**REMARKS**

Applicant thanks the Examiner for acknowledging his claim to priority under 35 U.S.C. § 119, and receipt of certified copies of the priority document from the International Bureau.

Claims 1-7 are all the claims pending in the application.

The Examiner has objected to the Abstract of the disclosure for a typographical error. Applicant has amended the Abstract to address this objection.

The Examiner has objected to claims 1-5 under 35 U.S.C. 112, second paragraph, for indefiniteness.

The Examiner has asserted that although a method is claimed in each claim, there is no clear method steps recited in active tense such as: transmitting, assigning, selecting, providing, .....etc., citing *Ex parte Erlich*, 3 USPQ 2d 1011 (Bd. Pat. App. & Inter. 1986). Applicant respectfully disagrees. The Board held in *Ex parte Erlich* that attempts to claim a process without setting forth any steps involved in the process generally raises an issue of indefiniteness under 35 U.S.C. 112, second paragraph. However, the words “send”, “transmit”, “assign”, and “select” in claim 1 set forth the steps of the claimed method. Thus, Applicant respectfully traverses this rejection. In any event, the claim has been amended to “actively” recite the selecting step, and the rejection is therefore moot.

The Examiner has asserted that the limitation “each sending” in line 11 of claim 1 lacks antecedent basis. Applicant respectfully disagrees. Claim 1 mentions in line 4 that terminals send successively in separate periods, thus providing enough antecedent basis for the limitation “each sending”. Further, the claim language has been clarified to also render this rejection moot.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/830,772

Applicant has also amended claims 1, 4 and 5 in response to the Examiner's rejections, and respectfully requests that the Examiner reconsider and withdraw the indefiniteness rejection under 35 U.S.C. 112, second paragraph.

Claims 1-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,745,837 to Fuhrmann in view of USP 6,005,854 to Xu et al. Applicant respectfully traverses this rejection, and requests reconsideration and allowance of the claims in view of the following arguments.

Claim 1 recites an asynchronous transfer mode method of transmitting digital signals characterized in that at least one variable, selected from the group consisting of the duration of the period during which each terminal sends cells; the number of codes assigned to each terminal; and the number of symbols assigned to a particular code in a terminal, can be selected on each sending as a function of a particular power level.

The Examiner has agreed that Fuhrmann fails to teach selection of duration of sending period, number of codes assigned to each terminal and number of symbols assigned to a particular code in a terminal as a function of a particular power level. However, the Examiner has asserted that Xu discloses these features that Weber lacks. The Examiner then combined Fuhrmann and Xu and rejected the claims. Applicant respectfully disagrees, and asserts that the Examiner's combination of the prior art is improper and that the combination of the references would not result in the claimed invention.

The present application improves the quality of transmission in a telecommunication system by take account of the power available at a terminal. As shown in Figs. 3 and 4 of the

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/830,772

present application, according to the power level, the duration of the period during which each terminal sends cells can be changed, e.g., from 60 and 62 in Fig. 3 to 70 in Fig. 4, and from 66 in Fig. 3 to 74 in Fig. 4; the number of codes assigned to a terminal can be changed, e.g., the number of codes assigned to a terminal 16 (or cell 40 and 42) can be changed from four (C1-C4) in Fig. 3 to six (C1-C6) in Fig. 4, and the number of codes assigned to a cell 46 can be changed from four (C1-C4) in Fig. 3 to twelve (C1-C12) in Fig. 4. In addition, as shown in Figs. 5 and 6 of the present application, the number of symbols assigned to a particular code C1-C5 can also be selected.

However, Fuhrmann provides a method for carrying an ATM (point to point) communication protocol on a hybrid fiber coax CATV (point to multipoint/multipoint to point) system. Fuhrmann assigns on the MAC layer of a CATV system one or more orthogonal SCDMA codes exclusively for use by pairs of devices needing to communicate, thus establishing virtual point to point links in the physical point to multipoint environment of the CATV cable plant to allow the implementation of the ATM protocol in the CATV system (Fuhrmann, col. 2, line 42 to col. 3, line 4). Fuhrmann relates to the field far away from the present application, and is not analogous art.

Xu discloses a smart antenna CDMA communication system for providing a common frequency for both uplink and downlink communication; a communication system for providing synchronous CDMA communication on both the uplink and downlink communication channels without adding significant cost or bandwidth to the communication system; a communication system for efficiently addressing recovery from collisions at a base station caused by two remote

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/830,772

terminals; and a communication system for reducing the channel capacity used to synchronize a remote terminal. Xu provides downlink time slots (DTS) for synchronization and paging of all remote terminals and uplink time slots (UTS) for enabling rapid link request.

Thus, Fuhrmann and Xu solve completely different problems by completely different methods. There is not suggestion or motivation to modify the two references. Thus, the Examiner's combination of the prior art is improper.

Even if a skilled artisan were to combine Fuhrmann and Xu, the combination would not result in the claimed invention. Xu only talks about selection of an optimal synchronization signal syn 1, but fails to provide any deficiency of Fuhrmann.

First, in Xu, it is the code channels, for directing signals from a base station toward each corresponding remote station, that are modulated by orthogonal spreading codes (Xu, col. 3, line 66 to col. 4, line 1). However, in the claimed invention, it is the cells of data that are assigned orthogonal codes.

In addition, as shown in Fig. 4 of Xu, an access channel has a sync shift field 320 which enables substantially synchronized arrival of all uplink time slots (UTS) frames at the base station from all remote terminals in communication with the base station, even though the remote terminals are at varying distances from the base station. As shown in Fig. 10 of Xu, each of the four received sync 1 signals 702, 704, 706, and 708 is measured relative to received power and timing of reception. Rectangle 700 represents a power/time area above which a sync 1 signal is desirable. The sync 1 signal with the highest power will be selected. If the sync 1 signal 702 is selected, the sync shift signal would have a magnitude represented by arrow 710, and the power

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/830,772

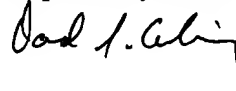
control signal would have a magnitude represented by arrow 712. Thus, Xu only teaches determining the sync shift signal and the power control signal according to power and timing of received signals. Contrary to the Examiner's assertion, Xu teaches nothing about selecting duration of period during which each terminal sends cells; or selecting the number of codes assigned to each terminal; or selecting the number of symbols assigned to a particular code in a terminal.

Therefore, Applicant respectfully submits that claim 1 and its dependent claims 2-7 are patentable.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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